

**REVISION RECORD  
FOR THE STATE OF CALIFORNIA**

**EMERGENCY SUPPLEMENT**

**November 3, 2006**

**2001 Title 24, Part 9, California Fire Code**

**PLEASE NOTE: The date of this Supplement is for identification purposes only.  
See the History Note Appendix for the adoption and effective dates of the provisions.**

It is suggested that the section number as well as the page number be checked when inserting this material and removing the superseded material. In case of doubt, rely on the section numbers rather than the page numbers since the section numbers must run consecutively.

It is further suggested that the superseded material be retained with this revision record sheet so that the prior wording of any section can be easily ascertained.

Please keep the removed pages with this revision page for future reference.

**NOTE**

Due to the fact that the application date for a building permit establishes the California Building Standards Code provisions that are effective at the local level, which apply to the plans, specifications and construction for that permit, it is strongly recommended that the removed pages be retained for historical reference.

**Remove Old Pages**

1-1 – 1-2  
1-35 – 1-38  
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**Insert New Blue Colored Pages**

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# PART I

## GENERAL

### ARTICLE 1 — ADMINISTRATION

#### SECTION 101 — GENERAL

**101.1 Title.** This code shall be known as the UNIFORM FIRE CODE, may be cited as such, and will be referred to herein as “this code.”

*[For SFM] For the state of California, this code shall be known as the CALIFORNIA FIRE CODE, may be cited as such, and will be referenced to herein as “this code.”*

#### 101.2 Scope.

**101.2.1 Scope.** This code prescribes regulations consistent with nationally recognized good practice for the safeguarding to a reasonable degree of life and property from the hazards of fire explosion, and dangerous conditions arising from the storage, handling and use of hazardous materials and devices, and from conditions hazardous to life or property in the use or occupancy of buildings or premises and provisions to assist emergency response personnel.

The provisions of this code shall supplement any and all laws relating to fire safety and shall apply to all persons without restriction, unless specifically exempted.

The provisions of this code do not apply to off-site transportation of hazardous materials in accordance with DOT requirements.

#### 101.2.2 Applications and vesting authority. SFM-California State Fire Marshal.

**Vesting Authority.** When adopted by the California State Fire Marshal (SFM) the provisions of this code shall be enforced only to the extent of authority granted to the SFM by the State Legislature.

The following is a list of the SFM’s specific scope of application for the provisions of this code as they apply to building standards. The specific statutory authority and reference for each SFM application is also shown.

**Applications:** Any building or structure used or intended for use as an asylum, jail, mental hospital, hospital, home for the elderly, children’s nursery, children’s home or institution, school or any similar occupancy of any capacity.

Any theater, dance hall, skating rink, auditorium, assembly hall, meeting hall, nightclub, fair building, or similar place of assemblage when 50 or more persons may gather together in a building, room or structure for the purpose of amusement, entertainment, instruction, deliberation, worship, drinking or dining, awaiting transportation, or education.

Authority Cited-Health and Safety Code Sections 13143 and 18949.2 (b), (c).

Reference-Health and Safety Code Section 13143, 1566.45, 1531.3 and 1568.0832.

**Small Family Day-care Homes.** Authority Cited-Health and Safety Code Sections 1597.45, 1597.54, 13143 and 17921.

Reference -Health and Safety Code Section 13143.

**Large Family Day-care Homes** Authority Cited-Health and Safety Code Sections 1597.46, 1597.54 and 17921.

Reference-Health and Safety Code Section 13143.

#### Residential Facilities and Residential Facilities for the Elderly

Authority Cite-Health and Safety Code Section 13113, 13131.5 and 13133.

Reference-Health and Safety Code Section 13143 and 1569.72.

**Any state institution or other state-owned or state-occupied building.**

Authority Cited-Health and Safety Code Section 13108.

Reference-Health and Safety Code Section 13143.

**High-Rise Structures.** Authority Cited-Health and Safety Code Section 13211.

Reference-Health and Safety Code Section 13143.

**Motion Picture Production Studios** Authority Cited-Health and Safety Code Section 13143.1

Reference-Health and Safety Code Section 13143.

**Organized Camps.** Authority Cited-Health and Safety Code Section 18897.3

Reference -Health and Safety Code Section 13143.

All hotels, motels, lodging houses, apartment houses and dwellings, including congregate residences and buildings and structures accessory thereto.

Multiple-story structures existing on January 1, 1975, let for human habitation, including and limited to, hotels, motels, apartment houses, less than 75 feet (22 860mm) above the lowest floor level having building access, wherein rooms, used for sleeping are let above the ground floor.

Authority Cited- Health and Safety Code Sections 13143.2 and 17921.

Reference-Health and Safety Code Section 13143.

Certified family-care homes, out-of-home placement facilities, halfway houses, drug and/or alcohol rehabilitation facilities and any building or structure used or intended for use as a home or institution for the housing of any person of any age when such person is referred to or placed within such home or institution for protection social care and supervision services by any governmental agency.

Authority Cited -Health and Safety Code Section 13143.6

Reference-Health and Safety Code Section 13143.

**Tents, awnings or other fabric enclosures used in connection with any occupancy.**

Authority Cited-Health and Safety Code Section 13116.

Reference-Health and Safety Code Section 13143.

**Fire alarm devices, equipment systems, in connection with any occupancy.**

Authority Cited-Health and Safety Code Section 13114.

#### Hazardous Materials.

Authority Cited-Health and Safety Code Sections 13143.9

Reference-Health and Safety Code, Sections 25531-25545.

#### Flammable and combustible liquids.

Authority Cited-Health and Safety Code Section 13143.6

#### Wildland-Urban Interface Fire Area.

Authority Cited-Health and Safety Code Section 13143, 13108.5 (a) and 18949.2 (b) and (c) and Government Code Section 51189.

*Reference-Health and Safety Code (H&SC) Section 13143 and Government Code (GC) Section 51176, 51177, 51178, and 51179 and Public Resource Code Section 4201 through 4204.*

**101.2.2.2 Enforcing Agency.** Pursuant to Section 13146, Health and Safety Code, the responsibility for enforcement of building standards adopted by the state fire marshal and published in the California Building Standards Code relating to fire and panic safety and other regulations of the state fire marshal shall be as follows:

1. The city, county, or city and county jurisdiction in the area affected by the standard or regulation shall delegate the enforcement of the building standards relating to fire and panic safety and other regulations of the state fire marshal as they relate to Group R, Division 3 dwellings as described in Section 310 of Part 2 of the California Building Standards Code, to either of the following:

1.1 The chief of the fire authority of the city, county, or city and county, or authorized representative.

1.2 The chief building official of the city, county, or city and county or an authorized representative.

2. The chief of any city or county fire department or of any fire protection district, and any authorized representative, shall enforce within its jurisdiction the building standards and other regulations of the state fire marshal, except those described in Section 101.2.2.2, Item 1 or Item 4.

3. The state fire marshal shall have the authority to enforce the building standards and other regulations of the state fire marshal in areas outside of corporate cities and districts providing fire protection services.

4. The state fire marshal shall have the authority to enforce such building standards and other regulations of the state fire marshal in corporate and districts providing fire-protection services on request of the chief fire official or the governing body.

5. Any fee charged pursuant to the enforcement authority of this section shall not exceed the estimated reasonable cost of providing the service for which the fee is charged, pursuant to Section 66014 of the Government Code.

**101.3 Subjects Not Specifically Regulated by this Code.** Where no applicable standards or requirements are set forth in this code, or contained within other laws, codes, regulations, ordinances or bylaws adopted by the jurisdiction, compliance with applicable standards of the National Fire Protection Association or other nationally recognized fire safety standards as are approved shall be deemed as prima facie evidence of compliance with the intent of this code. See also Section 9001.2.

Nothing herein shall derogate from the power of the chief to determine compliance with codes or standards for those activities or installations within the chief's jurisdiction or responsibility.

**101.4 Supplemental Rules and Regulations.** The chief is authorized to render interpretations of this code and to make and enforce rules and supplemental regulations in order to carry out the application and intent of its provisions. Such interpretations, rules and regulations shall be in conformance with the intent and purpose of this code and shall be available to the public during normal business hours.

**101.5 Liability.** The chief and other individuals charged by the chief with the control or extinguishment of any fire, the enforcement of this code or any other official duties, acting in good faith and without malice in the discharge of their duties, shall not thereby be rendered personally liable for any damage that may accrue to persons or property as a result of any act or by reason of any act or omission in the discharge of their duties. Any suit brought against the chief or such individuals because of such act or omission

performed in the enforcement of any provision of such codes or other pertinent laws or ordinances implemented through the enforcement of this code or enforced by the code enforcement agency shall be defended by this jurisdiction until final termination of such proceedings, and any judgment resulting therefrom shall be assumed by this jurisdiction.

This code shall not be construed to relieve from or lessen the responsibility of any person owning, operating or controlling any building or structure for any damages to persons or property caused by defects, nor shall the code enforcement agency or its parent jurisdiction be held as assuming any such liability by reason of the inspections authorized by this code or any permits or certificates issued under this code.

See also Section 103.3.2.1.

**101.6 Conflicting Provisions.** Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall be applicable.

**101.7 Severability.** If any provision of this code or the application thereof to any person or circumstance is held invalid, the remainder of the code and the application of such provision to other persons or circumstances shall not be affected thereby.

**101.8 References to Appendix.** When this code references the appendix, the provisions in the appendix shall not apply unless specifically adopted.

**101.9 Amendments.** When reference is made to a portion of this code or other applicable laws or ordinances, the reference applies to all amendments and additions now or hereafter made.

## SECTION 102 — RETROACTIVE APPLICATION TO EXISTING CONDITIONS

**102.1 Existing Conditions.** The provisions of this code shall apply to conditions arising 180 days after the publication thereof or at a later date as established by the California Building Standards Commission, conditions not legally in existence at the effective date of this code, and to conditions which, in the opinion of the chief, constitute a distinct hazard to life or property. See also Appendices 1-A and 1-B.

## SECTION 103 — INSPECTION AND ENFORCEMENT

### 103.1 General.

**103.1.1 Technical assistance.** To determine the acceptability of technologies, processes, products, facilities, materials and uses attending the design, operation or use of a building or premises subject to the inspection of the department, the chief is authorized to require the owner or the person in possession or control of the building or premises to provide, without charge to the jurisdiction, a technical opinion and report. The opinion and report shall be prepared by a qualified engineer, specialist, laboratory or fire safety specialty organization acceptable to the chief and the owner and shall analyze the fire-safety properties of the design, operation or use of the building or premises and the facilities and appurtenances situated thereon, to recommend necessary changes.

The chief is authorized to require design submittals to bear the stamp of a professional engineer.

**103.1.2 Alternate materials and methods.** The chief is authorized to approve alternate materials or methods provided that the chief finds that the proposed design, use or operation satisfactorily complies with the intent of this code and that the method of work performed or operation is, for the purpose intended, at least equivalent to that prescribed in this code in quality, strength, effectiveness, fire resistance, durability and safety. Approvals under the authority herein contained shall be subject to the approval of the building official whenever the alternate material or method involves matters regulated by the Building Code.

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2. Automatic sprinkler systems may be connected to the domestic water-supply main when approved by the building official, provided the domestic water supply is of adequate pressure, capacity and sizing for the combined domestic and sprinkler requirements. In such case, the sprinkler system connection shall be made between the public water main or meter and the building shutoff valve, and there shall not be intervening valves or connections. The fire department connection may be omitted when approved.

3. Automatic sprinkler systems in Group R Occupancies four stories or less may be in accordance with the Building Code requirements for residential sprinkler systems. (See UBC Standard 9-3.)

## 1003.2 Required Installations.

**1003.2.1 General.** An automatic fire-extinguishing system shall be installed in the occupancies and locations as set forth in Section 1003.2.

For provisions on special hazards and hazardous materials, see Section 1001.9 and Articles 79, 80 and 81.

**1003.2.2 All occupancies except Group R, Division 3 and Group U Occupancies.** Except for Group R, Division 3 and Group U Occupancies, an automatic sprinkler system shall be installed:

1. In every story or basement of all buildings when the floor area exceeds 1,500 square feet (139.4 m<sup>2</sup>) and there is not provided at least 20 square feet (1.86 m<sup>2</sup>) of opening entirely above the adjoining ground level in each 50 lineal feet (15 240 mm) or fraction thereof of exterior wall in the story or basement on at least one side of the building. Openings shall have a minimum dimension of not less than 30 inches (762 mm). Such openings shall be accessible to the fire department from the exterior and shall not be obstructed in a manner that firefighting or rescue cannot be accomplished from the exterior.

When openings in a story are provided on only one side and the opposite wall of such story is more than 75 feet (22 860 mm) from such openings, the story shall be provided with an approved automatic sprinkler system, or openings as specified above shall be provided on at least two sides of an exterior wall of the story.

If any portion of a basement is located more than 75 feet (22 860 mm) from openings required in Section 1003.2.2, the basement shall be provided with an approved automatic sprinkler system.

2. At the top of rubbish and linen chutes and in their terminal rooms. Chutes extending through three or more floors shall have additional sprinkler heads installed within such chutes at alternate floors. Sprinkler heads shall be accessible for servicing.

3. In rooms where nitrate film is stored or handled. See also Article 33.

4. In protected combustible fiber storage vaults as defined in Article 2. See also Article 28.

5. Throughout all buildings with a floor level with an occupant load of 30 or more that is located 55 feet (16 764 mm) or more above the lowest level of fire department vehicle access.

**EXCEPTION:** 1. Airport control towers.

2. Open parking structures.

3. Group F, Division 2 Occupancies.

## 1003.2.3 Group A Occupancies.

**1003.2.3.1 Drinking establishments.** An automatic sprinkler system shall be installed in rooms used by the occupants for the consumption of alcoholic beverages and unseparated accessory uses where the total area of such unseparated rooms and assembly uses exceeds 5,000 square feet (465 m<sup>2</sup>). For uses to be considered as separated, the separation shall not be less than as required for a one-

hour occupancy separation. The area of other uses shall be included unless separated by at least a one-hour occupancy separation.

**1003.2.3.2 Basements.** An automatic sprinkler system shall be installed in basements classified as a Group A Occupancy when the basement is larger than 1,500 square feet (139 m<sup>2</sup>) in floor area.

**1003.2.3.3 Exhibition and display rooms.** An automatic sprinkler system shall be installed in Group A Occupancies which have more than 12,000 square feet (1114.8 m<sup>2</sup>) of floor area which can be used for exhibition or display purposes.

**1003.2.3.4 Stairs.** An automatic sprinkler system shall be installed in enclosed usable space below or over a stairway in Group A, Divisions 2, 2.1, 3 and 4 Occupancies.

**1003.2.3.5 Multitheater complexes.** An automatic sprinkler system shall be installed in every building containing a multitheater complex.

**1003.2.3.6 Amusement buildings.** An automatic sprinkler system shall be installed in all amusement buildings. The main water-flow switch shall be electrically supervised. The sprinkler main cutoff valve shall be supervised. When the amusement building is temporary, the sprinkler water-supply system may be of an approved temporary type.

**EXCEPTION:** An automatic sprinkler system need not be provided when the floor area of a temporary amusement building is less than 1,000 square feet (92.9 m<sup>2</sup>) and the exit travel distance from any point is less than 50 feet (15 240 mm).

**1003.2.3.7 Stages.** All stages shall be sprinklered. Such sprinklers shall be provided throughout the stage and in dressing rooms, workshops, storerooms and other accessory spaces contiguous to such stages.

**EXCEPTIONS:** 1. Sprinklers are not required for stages 1,000 square feet (92.9 m<sup>2</sup>) or less in area and 50 feet (15 240 mm) or less in height where curtains, scenery or other combustible hangings are not retractable vertically. Combustible hangings shall be limited to a single main curtain, borders, legs and a single backdrop.

2. Under stage areas less than 4 feet (1219 mm) in clear height used exclusively for chair or table storage and lined on the inside with <sup>5</sup>/<sub>8</sub>-inch (16 mm) Type X gypsum wallboard or an approved equal.

**1003.2.3.8 Smoke-protected assembly seating.** All areas enclosed with walls and ceilings in buildings or structures containing smoke-protected assembly seating shall be protected with an approved automatic sprinkler system.

**EXCEPTION:** Press boxes and storage facilities less than 1,000 square feet (92.9 m<sup>2</sup>) in area and in conjunction with outdoor seating facilities where all means of egress in the seating area are essentially open to the outside.

## 1003.2.4 Group E Occupancies.

**1003.2.4.1 General.** An automatic fire sprinkler system shall be installed throughout all buildings containing a Group E, Division 1 Occupancy.

**EXCEPTIONS:** 1. When each room used for instruction has at least one exterior exit door at ground level and when rooms used for assembly purposes have at least one half of the required exits directly to the exterior ground level, a sprinkler system need not be provided.

2. When area separation walls, or occupancy separations having a fire-resistive rating of not less than two hours subdivide the building into separate compartments such that

each compartment contains an aggregate floor area not greater than 20,000 square feet (1858 m<sup>2</sup>), an automatic sprinkler system need not be provided.

**1003.2.4.2 Basements.** An automatic sprinkler system shall be installed in basements classified as Group E, Division 1 Occupancies.

**1003.2.4.3 Stairs.** An automatic fire sprinkler system shall be installed in enclosed usable space below or over a stairway in Group E, Division 1 Occupancies.

**1003.2.4.4 [For SFM] Public Schools—Automatic Sprinkler System Requirements**

**1003.2.4.4.1 [For SFM] New Public School Campus.** A State Fire Marshal approved automatic sprinkler system shall be provided on all new public school campus as defined in section 215 and maintained in accordance with the California Building Code and Article 91. See section 1006.2.4.2.2.1.1 for automatic detection requirements.

**1003.2.4.4.2 [For SFM] Permanent Portable Buildings.** A portable building that is used to serve or house students and is certified, as a permanent building on a new public school campus by the public school administration shall comply with the requirements of section 1003.2.4.4.1.

**1003.2.4.4.3 [For SFM] Fire-Resistive Substitution for Schools.** All buildings of a school campus provided with an approved automatic fire sprinkler system shall be entitled to include in the design and construction documents, all of the applicable fire-resistive construction substitutions as permitted in the California Building Code, section 508.

**1003.2.5 Group F Occupancies.**

**1003.2.5.1 Woodworking occupancies.** An automatic fire sprinkler system shall be installed in Group F woodworking occupancies over 2,500 square feet (232.3 m<sup>2</sup>) in area that use equipment, machinery or appliances which generate finely divided combustible waste or which use finely divided combustible materials.

**1003.2.6 Group H Occupancies.**

**1003.2.6.1 General.** An automatic fire-extinguishing system shall be installed in Group H, Divisions 1, 2, 3 and 7 Occupancies.

**1003.2.6.2 Group H, Division 4 Occupancies.** An automatic fire-extinguishing system shall be installed in Group H, Division 4 Occupancies having a floor area of more than 3,000 square feet (279 m<sup>2</sup>).

**1003.2.6.3 Group H, Semiconductor Fabrication Facilities.** An automatic fire-extinguishing system shall be installed throughout buildings containing semiconductor fabrication facilities classified as Group H, Division 6 Occupancies. The design of the sprinkler system shall not be less than that required under the occupancy hazard classifications as follows:

LOCATION	OCCUPANCY HAZARD CLASSIFICATION
Fabrication areas	Ordinary Hazard Group 2
Service corridors	Ordinary Hazard Group 2
Storage rooms without dispensing	Ordinary Hazard Group 2
Storage rooms with dispensing	Extra Hazard Group 2
Corridors	Ordinary Hazard Group 2 <sup>1</sup>

<sup>1</sup> When the design area of the sprinkler system consists of a corridor protected by one row of sprinklers, the maximum number of sprinklers that needs to be calculated is 13.

**1003.2.7 Group I Occupancies.**

**1003.2.7.1 General.** An automatic sprinkler system shall be installed in Group I Occupancies. In Group I, Division 1.1 and Group I, Division 2 Occupancies, approved quick-response or residential sprinklers shall be installed throughout patient sleeping areas.

**EXCEPTION:** In jails, prisons and reformatories, the piping system may be dry, provided a manually operated valve is installed at a continuously monitored location. Opening of the valve will cause the piping system to be charged. Sprinkler heads in such systems shall be equipped with fusible elements or the system shall be designed as required for deluge systems in the Fire Code (See Section 9003, Standard n.2.9).

**1003.2.7.2 [For SFM] Nurses Stations.** In nurses stations in new and existing facilities, a minimum of one (1) smoke detector interconnected to the facility fire alarm system shall be placed and installed in accordance with the manufacturer's specifications. Nurses stations in new and existing facilities are regulated in the California Building Code and the California Code of Regulations, Title 19

**1003.2.7.3 [For SFM] Nurses Stations Sprinkler Systems.** In nurses stations in existing facilities automatic sprinkler systems may be supplied by the domestic water supply and sprinklers shall be located directly over the nurse's station.

**1003.2.8 Group M Occupancies.** An automatic sprinkler system shall be installed in rooms classed as Group M Occupancies where the floor area exceeds 12,000 square feet (1114.8 m<sup>2</sup>) on any floor or 24,000 square feet (2229.6 m<sup>2</sup>) on all floors or in Group M Occupancies more than three stories in height. The area of mezzanines shall be included in determining the areas where sprinklers are required.

**1003.2.9 Group R, Division 1 Occupancies.** An automatic sprinkler system shall be installed throughout every apartment house three or more stories in height or containing 5 or more dwelling units, every congregate residence three or more stories in height or having an occupant load of 11 or more, and every hotel three or more stories in height or containing 6 or more guest rooms. Residential or quick-response standard sprinklers shall be used in the dwelling units and guest room portions of the building. [For SFM] The requirements of this subsection shall not mandate the retroactive installation of an automatic sprinkler system to an existing R1 occupancy.

**1003.2.10 Sound stages and solid-ceiling sets and platforms.** An automatic sprinkler system shall be installed in all permanent sound stages and in all interior solid-ceiling sets over 6000 square feet (55.7 m<sup>2</sup>) in area and under platforms over 600 square feet (55.7 m<sup>2</sup>) in area which exceed 3 feet (914 mm) in height.

**EXCEPTIONS:** 1. When heat detectors are installed beneath solid-ceiling sets over 600 square feet (55.7 m<sup>2</sup>) in area and under platforms (when provided) over 600 square feet (55.7 m<sup>2</sup>) in area which exceed 3 feet (914 mm) in height.

The detectors shall be spaced 30 feet (9144 mm) on center or as required by the manufacturer's installation instructions. The detectors shall be connected to an approved and listed central proprietary or remote station service or a local alarm which will give an audible signal at a constantly attended location. Such system shall be installed in accordance with Article 10.

2. Sets with solid-ceilings over 600 square feet (55.7 m<sup>2</sup>) in area designed to allow the ceiling to be positioned to allow for the operation of the automatic fire sprinkler system after filming has been completed for the day.

**1003.3 Sprinkler System Monitoring and Alarms.**

**1003.3.1 Where required.** All valves controlling the water supply for automatic sprinkler systems and water-flow switches on all

sprinkler systems shall be electrically monitored for integrity where the number of sprinklers is:

1. Twenty or more in Group I, Divisions 1.1 and 1.2 Occupancies.
2. One hundred or more in all other occupancies.

Valve monitoring and water-flow alarm and trouble signals shall be distinctly different and shall be automatically transmitted to an approved central station, remote station or proprietary monitoring station as defined by *[For SFM] NFPA 72 as amended in Article 91* or, when approved shall sound an audible signal at a constantly attended location.

**EXCEPTION:** Underground key or hub valves in roadway boxes provided by the municipality or public utility need not be monitored.

**1003.3.2 Alarms.** An approved audible sprinkler flow alarm shall be provided on the exterior of the building in an approved location. A single approved audible sprinkler flow alarm shall be provided in the interior of the building in a normally occupied location. Actuation of the alarm shall be as set forth in the Fire Code (See Section 9003, Standard n.2.9).

**EXCEPTION:** The separate interior alarm is not required when the sprinkler water flow switch activates the building fire alarm system notification appliances.

**1003.4 Permissible Sprinkler Omissions.** Subject to the approval of the building official and with the concurrence of the chief, sprinklers may be omitted in rooms or areas as follows:

1. When sprinklers are considered undesirable because of the nature of the contents or in rooms or areas which are of noncombustible construction with wholly noncombustible contents and which are not exposed by other areas. Sprinklers shall not be omitted from any room merely because it is damp, of fire-resistive construction or contains electrical equipment.
2. Sprinklers shall not be installed when the application of water or flame and water to the contents may constitute a serious life or fire hazard, as in the manufacture or storage of quantities of aluminum powder, calcium carbide, calcium phosphide, metallic sodium and potassium, quicklime, magnesium powder and sodium peroxide.
3. Safe deposit or other vaults of fire-resistive construction, when used for the storage of records, files and other documents, when stored in metal cabinets.
4. Communication equipment areas under the exclusive control of a public communication utility agency, provided:
  - 4.1 The equipment areas are separated from the remainder of the building by one-hour fire-resistive occupancy separation; and
  - 4.2 Such areas are used exclusively for such equipment; and
  - 4.3 An approved automatic smoke-detection system is installed in such areas and is supervised by an approved central, proprietary or remote station service or a local alarm which will give an audible signal at a constantly attended location; and
  - 4.4 Other approved fire-protection equipment such as portable fire extinguishers or Class II standpipes are installed in such areas.
5. Other approved automatic fire-extinguishing systems may be installed to protect special hazards or occupancies in lieu of automatic sprinklers.

## SECTION 1004 — STANDPIPES

### 1004.1 Installation Requirements.

**1004.1.1 General.** Standpipe systems shall be installed in accordance with Section 1004 (See Section 9003, Standard n.2.12).

Fire hose threads used in connection with fire-extinguishing systems shall be national standard hose thread or as approved.

The location of fire department hose connections shall be approved.

In buildings used for high-piled combustible storage, fire protection shall be in accordance with Article 81.

**1004.1.2 Standards.** Standpipe systems shall comply with the Fire Code. (See Section 9003, Standard n.2.12).

**1004.2 Required Installations.** Standpipe systems shall be provided as set forth in Table 1004-A.

**1004.3 Location of Class I Standpipe Hose Connections.** There shall be a Class I standpipe outlet connection at every floor-level landing of every required stairway above or below grade and on each side of the wall adjacent to the exit opening of a horizontal exit. Outlets at stairways shall be located within the exit enclosure or, in the case of pressurized enclosures, within the vestibule or exterior balcony, giving access to the stairway.

Risers and laterals of Class I standpipe systems not located within an enclosed stairway or pressurized enclosure shall be protected by a degree of fire resistance equal to that required for vertical enclosures in the building in which they are located.

**EXCEPTION:** In buildings equipped with an approved automatic sprinkler system, risers and laterals which are not located within an enclosed stairway or pressurized enclosure need not be enclosed within fire-resistive construction.

There shall be at least one outlet above the roof line when the roof has a slope of less than 4 units vertical in 12 units horizontal (33.3% slope).

In buildings where more than one standpipe is provided, the standpipes shall be interconnected at the bottom.

**1004.4 Location of Class II Standpipe Hose Connections.** Class II standpipe outlets shall be accessible and shall be located so that all portions of the building are within 30 feet (9144 mm) of a nozzle attached to 100 feet (30 480 mm) of hose.

In Group A, Divisions 1 and 2.1 Occupancies with occupant loads of more than 1,000, outlets shall be located on each side of any stage, on each side of the rear of the auditorium and on each side of the balcony.

Fire-resistant protection of risers and laterals of Class II standpipe systems is not required.

**1004.5 Location of Class III Standpipe Hose Connections.** Class III standpipe systems shall have outlets located as required for Class I standpipes in Section 1004.3 and shall have Class II outlets as required in Section 1004.4.

Risers and laterals of Class III standpipe systems shall be protected as required for Class I systems.

**EXCEPTIONS:** 1. In buildings equipped with an approved automatic sprinkler system, risers and laterals which are not located within an enclosed stairway or pressurized enclosure need not be enclosed within fire-resistive construction.

2. Laterals for Class II outlets on Class III systems need not be protected.

In buildings where more than one Class III standpipe is provided, the standpipes shall be interconnected at the bottom.

## SECTION 1005 — PROTECTION OF COMMERCIAL COOKING OPERATIONS

**1005.1 Ventilating Hood and Duct Systems.** A ventilating hood and duct system shall be provided in accordance with the Mechanical Code for commercial-type food heat-processing equipment that produces grease-laden vapors.

**1005.2**  
**1006.2.2.1**

**1005.2 Fire-extinguishing System.**

**1005.2.1 Where required.** Approved automatic fire-extinguishing systems shall be provided for the protection of commercial-type cooking equipment.

**EXCEPTION:** The requirement for protection does not include steam kettles and steam tables or equipment which as used does not create grease-laden vapors.

**1005.2.2 Type of system.** Protection of new commercial-type cooking equipment shall be by means of an automatic fire-extinguishing system complying with UL 300 that is listed and labeled for its intended use.

Systems shall be installed in accordance with the Mechanical Code, their listing and the manufacturer's instruction. Other systems shall be of an approved design and shall be of one of the following types:

1. Automatic sprinkler system.
2. Dry-chemical extinguishing system.
3. Carbon dioxide extinguishing system.
4. Wet-chemical extinguishing system.

**1005.2.3 Extent of protection.**

**1005.2.3.1 General.** The automatic fire-extinguishing system used to protect ventilating hoods and ducts and cooking appliances shall be installed to include cooking surfaces, deep fat fryers, griddles, upright broilers, charbroilers, range tops and grills. Protection shall also be provided for the enclosed plenum space within the hood above filters and exhaust ducts serving the hood.

**1005.2.3.2 Carbon dioxide systems.** When carbon dioxide systems are used, there shall be a nozzle at the top of the ventilating duct. Additional nozzles that are symmetrically arranged to give uniform distribution shall be installed within vertical ducts exceeding 20 feet (6096 mm) and horizontal ducts exceeding 50 feet (15 240 mm). Dampers shall be installed at either the top or the bottom of the duct and shall be arranged to operate automatically upon activation of the fire-extinguishing system. When the damper is installed at the top of the duct, the top nozzle shall be immediately below the damper. Carbon dioxide automatic fire-extinguishing systems shall be sufficiently sized to protect all hazards venting through a common duct simultaneously.

**1005.2.4 Automatic power, fuel and ventilation shutoff.**

**1005.2.4.1 General.** Automatic fire-extinguishing systems shall be interconnected to the fuel or current supply for cooking equipment. The interconnection shall be arranged to automatically shut off all cooking equipment and electrical receptacles which are located under the hood when the system is actuated.

Shutoff valves or switches shall be of a type that require manual operation to reset.

**1005.2.4.2 Carbon dioxide systems.** Commercial-type cooking equipment protected by an automatic carbon dioxide extinguishing system shall be arranged to shut off the ventilation system upon activation.

**1005.2.5 Special provisions for automatic sprinkler systems.** Commercial-type cooking equipment protected by automatic sprinkler systems shall be supplied from a separate, readily accessible indicating-type control valve that is identified.

Sprinklers used for the protection of fryers shall be listed for that application and installed in accordance with their listing.

**1005.2.6 Manual system operation.** A readily accessible manual activation device installed at an approved location shall be provided for dry chemical, wet chemical and carbon dioxide systems. The activation device is allowed to be mechanically or electrically operated. If electrical power is used, the system shall be

connected to a standby power system and a visual means shall be provided to show that the extinguishing system is energized. Instructions for operating the fire-extinguishing system shall be posted adjacent to manual activation devices.

**1005.2.7 Portable fire extinguishers.** A fire extinguisher listed and labeled for Class K fires shall be installed within 30 feet (9144 mm) of commercial food heat-processing equipment, as measured along an unobstructed path of travel, in accordance with *[For SFM] California Code of Regulations, Title 19, Division 1, Chapter 3.*

**EXCEPTION:** Approved extinguishers utilizing other extinguishing agents that are compatible for use in the control of cooking grease fires.

**1005.2.8 Operations and maintenance.** The ventilation system in connection with hoods shall be operated at the required rate of air movement, and classified grease filters shall be in place when equipment under a kitchen grease hood is used.

If grease extractors are installed, they shall be operated when the commercial-type cooking equipment is used.

Hoods, grease-removal devices, fans, ducts and other appurtenances shall be cleaned at intervals necessary to prevent the accumulation of grease. Cleanings shall be recorded, and records shall state the extent, time and date of cleaning. Such records shall be maintained on the premises.

Extinguishing systems shall be serviced at least every six months or after activation of the system. Inspection shall be by qualified individuals, and a Certificate of Inspection shall be forwarded to the chief upon completion.

Fusible links and automatic sprinkler heads shall be replaced at least annually, and other protection devices shall be serviced or replaced in accordance with the manufacturer's instructions.

**EXCEPTION:** Frangible bulbs need not be replaced annually.

## SECTION 1006 — FIRE ALARM SYSTEMS

### 1006.1 General.

**1006.1.1 Applicability.** Installation and maintenance of fire alarm systems shall be in accordance with Section 1006.

**1006.1.2 Problematic systems and systems out of service.** See Section 1001.5.3.

### 1006.2 Required Installations.

#### 1006.2.1 General.

**1006.2.1.1 When required.** An approved manual, automatic or manual and automatic fire alarm system shall be provided in accordance with Section 1006.2.

**1006.2.1.2 Use of area separation walls to define separate local buildings.** For the purposes of Section 1006, area separation walls shall not define separate buildings.

**1006.2.1.3 [For SFM]** Where smoke detection systems are required by other sections of this code, when approved by the authority having jurisdiction, approved heat detectors may be provided in lieu of smoke detectors in rooms and areas such as furnace rooms, boiler rooms, closets, unusable space under floor, bathrooms, attached garages, attics, kitchens, laundry rooms and in areas of similar use, where ambient conditions would cause actuation of, or prohibit the installation of smoke detectors.

#### 1006.2.2 Group A Occupancies.

**1006.2.2.1 General.** Group A, Divisions 1, 2 and 2.1 Occupancies shall be provided with a manual fire alarm system in accordance with Section 1006.2.2.

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**EXCEPTION:** *[For SFM]: Heat detectors may be used in closets, unusable space under floor areas, storage rooms, bathrooms and rooms of similar use.*

**1006.2.7.2.2 System initiation.** Actuation of an automatic fire-extinguishing system, a manual fire alarm box or a fire detector shall initiate an approved fire alarm signal which automatically notifies staff. Presignal systems shall not be used.

**1006.2.7.2.3 Manual fire alarm boxes.**

1. **General.** Manual fire alarm boxes need not be located in accordance with Section 1006.3.3.1 when they are provided at staff-attended locations having direct supervision over areas where manual fire alarm boxes have been omitted.

2. **Locking of manual fire alarm boxes.** Manual fire alarm boxes are allowed to be locked in areas occupied by detainees, provided that staff members are present within the subject area and have keys readily available to operate the manual fire alarm boxes.

**1006.2.7.2.4 Smoke detection.** An approved automatic smoke-detection system shall be installed throughout resident housing areas, including sleeping areas and contiguous day rooms, group activity spaces and other common spaces normally accessible to residents.

**EXCEPTION:** Other approved smoke-detection arrangements providing equivalent protection, such as placing detectors in exhaust ducts from cells or behind protective grilles, are allowed when necessary to prevent damage or tampering.

**1006.2.7.2.5 Zoning and annunciation.** Alarm and trouble signals shall be annunciated at an approved constantly attended location. Such signals shall indicate the zone of origin.

Separate zones shall be provided for individual fire-protection systems, buildings, floors, cell complexes and sections of floors compartmented by smoke-stop partitions.

**1006.2.7.2.6 Monitoring.** The fire alarm system shall be monitored by an approved central, proprietary or remote station service or by transmission of a local alarm which will give audible and visual signals at an approved constantly attended location.

**1006.2.8 Group M Occupancies.** See Section 1006.2.12.

**1006.2.9 Group R Occupancies.**

**1006.2.9.1 New Group R Occupancies.**

**1006.2.9.1.1 General.** Group R Occupancies shall be provided with fire alarm systems in accordance with Section 1006.2.9 and the California Building Code. Group R, Division 1 Occupancies shall be provided with a manual and automatic fire alarm system in apartment houses three or more stories in height or containing 16 or more dwelling units, in hotels three or more stories in height or containing 20 or more guest rooms, and in congregate residences three or more stories in height or having an occupant load of 20 or more. See also Section 1006.2.12.

**EXCEPTIONS:** 1.A manual fire alarm system need not be provided in buildings not over two stories in height when all individual dwelling units and contiguous attic and crawl spaces are separated from each other and public or common areas by at least one-hour fire-resistive occupancy separations and each individual dwelling unit or guest room has an exit directly to a public way, exit court or yard.

2. A separate fire alarm system need not be provided in buildings which are protected throughout by an approved supervised fire sprinkler system conforming with the *[For SFM] California Building Code* and having a local alarm to notify all occupants. *[For SFM] Occupant notification shall result from actuation of a water flow detection device or the*

*operation of any manual fire alarm box. At least one manual fire alarm box shall be installed at a location approved by the authority having jurisdiction. All initiating and indicating devices shall be electrically supervised.*

**1006.2.9.1.1.1 [For SFM] Group R, Division 2.1 and 2.3 Occupancies.** Group R, Division 2.1 and 2.3 Occupancy shall be provided with an approved manual and automatic fire alarm system in accordance with Section 1006.2.9 and the California Building Code.

*System smoke detectors shall be installed in exit corridors and common areas. Upon actuation, these smoke detectors shall activate the fire alarm notification appliances throughout the building, including those located in guestrooms and dwelling units.*

*Single-station smoke detectors shall be installed in guestrooms and dwelling units in accordance with the California Building Code, Section 310.9. Upon actuation, these smoke detectors shall only annunciate within such guestroom and dwelling unit and shall not activate the fire alarm system notification appliances that are located throughout the building.*

*System smoke detectors and trouble conditions alarms shall be annunciated at a location that is constantly attended within the building.*

**EXCEPTION:** *Buildings housing nonambulatory clients on the first story only, and which are protected throughout by the following:*

1. *An approved and supervised automatic sprinkler system, as specified in the California Building Code, which upon activation will initiate the fire alarm system to notify all occupants.*

2. *A manual fire alarm system in accordance with this section and the California Building Code.*

**1006.2.9.1.2 Manual fire alarm boxes.** Manual fire alarm boxes are not required for interior corridors having smoke detectors as specified in Section 1006.2.9.1.3.

**1006.2.9.1.3 Smoke detectors.** Smoke detectors shall be provided in all common areas and interior corridors *[For SFM] of Group R, Division 1 occupancies with an occupant load of 10 or more.*

**1006.2.9.1.4 Heat detectors.** Heat detectors shall be provided in all common areas such as recreational rooms, laundry rooms, furnace rooms, and similar areas *[For SFM] of Group R, Division 1.*

**1006.2.9.1.5 Visual signaling devices.** Guest rooms *[For SFM] required by the California Building Code, Section 1111B.4.5,* for persons with hearing impairments, shall be provided with *visual and audible fire alarm notification* appliances, activated by both the in-room smoke alarm and the building fire alarm system. It is permitted to use separate appliances to meet this requirement.

**1006.2.9.1.6 Single-station smoke alarms.** Approved single-station smoke *[For SFM] alarms or multiple-station smoke alarms* shall be installed in dwelling units, congregate residences

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and hotel and lodging house guest rooms. [For SFM] and in sleeping rooms of Group R, Division 2.1.1, 2.2.1, 2.3.1, and 6 Occupancies in accordance with the California Building Code.

Single-station smoke alarms or multiple station smoke alarms shall not be connected to a fire alarm system. See also Section 1006.2.9.1.5.

**EXCEPTION:** 1. Connection of such detectors for annunciation.

2. [For SFM] A fire alarm system with smoke detectors located in accordance with the California Building Code may be installed in lieu of smoke alarms. Upon actuation of the detector, only those notification appliances in the dwelling unit or guest room where the detector is actuated shall activate.

**1006.2.9.1.7 Smoke Alarms for One Bedridden Client.** In all facilities housing a bedridden client, smoke alarms shall receive their primary power from the building wiring when such wiring is served from a commercial source and shall be equipped with a battery backup. Smoke alarms shall be electrically interconnected so as to cause all smoke alarms to sound a distinctive alarm signal upon actuation of any single smoke alarm. Such alarm signal shall be audible throughout the facility at a minimum level of 15 db above ambient noise level. These devices need not be interconnected to any other fire alarm device, have a control panel, or be electrically supervised or provided with emergency power.

#### 1006.2.9.2 Existing Group R Occupancies.

**1006.2.9.2.1 [For SFM] Group R, Division 2.1 and 2.3 Occupancies.** Group R, Division 2.1 and 2.3 Occupancies shall be provided with a manual and automatic fire alarm system in accordance with Section 1006.2.9 and the California Building Code.

System smoke detectors shall be installed in exit corridors and common areas. Upon actuation, these smoke detectors shall activate the fire alarm notification appliances throughout the building including those located in guestrooms and dwelling units.

Single-station smoke detectors shall be installed in guestrooms and dwelling units in accordance with the California Building Code, Section 310.9. Upon actuation these smoke detectors shall only annunciate within such questroom and dwelling unit and shall not activate the fire alarm system notification appliances that are located throughout the building.

System smoke detectors and trouble conditions alarms shall be annunciated at a location that is constantly attended within the building.

**EXCEPTION:** Buildings housing nonambulatory clients on the first story only, and which are protected throughout by the following:

1. An approved and supervised automatic sprinkler system, as specified in the California Building Code, which upon activation will initiate the fire alarm system to notify all occupants.
2. A manual fire alarm system in accordance with this section and the California Building Code.

**1006.2.9.2.2 [For SFM] Group R, Division 2.2 Occupancies.** Group R, Division 2.2 Occupancies shall be provided with an approved manual fire alarm system in accordance with Section 1006.2.9 and the California Building Code.

**1006.2.9.2.3 [For SFM] Group R, Division 2.1.1. and 2.2.1 Occupancies.** In addition to smoke alarms required by Section 1006.2.9.1.6, Group R, Division 2.1.1 and 2.2.1 Occupancies shall be provided with one manual pull station at a location approved by

the authority having jurisdiction. Such pull station shall actuate a distinctive fire alarm signal, which shall be audible throughout the facility. These devices need not be interconnected to any other fire alarm device, electrically supervised or provided with emergency power.

#### 1006.2.9.3 Smoke Alarms in Existing Group R Occupancies.

**1006.2.9.3.1 General.** Existing Group R Occupancies not already provided with single-station smoke [For SFM] alarms shall be provided with approved single-station smoke alarms. Installation shall be in accordance with Section 1006.2.9.3.2.

**EXCEPTION:** Group R, Divisions 2.1.1 and 2.2.1 Occupancies housing a bedridden client, shall comply with Section 1006.2.9.1.7.

**1006.2.9.3.2 Installation.** Approved single-station smoke [For SFM] alarms shall be installed in existing dwelling units, congregate residences, and hotel and lodging houseguest rooms.

**1006.2.9.3.3 Locations within existing Group R Occupancies.** In dwelling units, [For SFM] smoke alarms shall be mounted on the ceiling or wall at a point centrally located in the corridor or area giving access to each separate sleeping area. Where sleeping rooms are on an upper level, the detector shall be placed at the center of the ceiling directly above the stairway. Smoke alarms shall also be installed in the basement of dwelling units having a stairway, which opens, from the basement into the dwelling. In hotel, lodging house and congregate residence sleeping rooms, smoke alarms shall be located on the ceiling or wall of each sleeping room.

#### 1006.2.10 Group S Occupancies. See Section 1006.2.12.

#### 1006.2.11 Group U Occupancies. No requirements.

#### 1006.2.12 Special uses and conditions.

##### 1006.2.12.1 Amusement buildings.

**1006.2.12.1.1 General.** An approved smoke-detection system shall be provided in amusement buildings in accordance with Section 1006.2.12.1.

**EXCEPTION:** In areas where ambient conditions will cause a smoke-detection system to alarm, an approved alternate type of automatic detector shall be installed.

**1006.2.12.1.2 Alarm system.** Activation of any single smoke detector, the automatic sprinkler system or other automatic fire-detection device shall immediately sound an alarm in the building at a constantly supervised location from which the manual operation of systems noted in Section 1006.2.12.1.3 can be initiated.

**1006.2.12.1.3 System response.** The activation of two or more smoke detectors, a single smoke detector monitored by an alarm verification zone, the automatic sprinkler system or other approved fire-detection device shall automatically:

1. Stop confusing sounds and other visual effects,
2. Activate approved directional exit marking, and
3. Cause illumination of the means of egress with light of not less than 1 footcandle (10.8 lx) at the walking surface.

**1006.2.12.1.4 Public address system.** The public address system is also allowed to serve as an alarm.

##### 1006.2.12.2 High-rise buildings.

**1006.2.12.2.1 General.** Group B office buildings and Group R, Division 1 Occupancies, each having floors used for human occupancy located more than 75 feet (22 860 mm) above the lowest

level of fire department vehicle access, shall be provided with an automatic fire alarm system and a communication system in accordance with Section 1006.2.12.2.

**1006.2.12.2.2 Automatic fire alarm system.** Smoke detectors shall be provided in accordance with Section 1006.2.12.2.2. Smoke detectors shall be connected to an automatic fire alarm system. The actuation of any detector required by Section 1006.2.12.2.2 shall operate the emergency voice alarm-signaling system and shall place into operation all equipment necessary to prevent the recirculation of smoke. Smoke detectors shall be located as follows:

1. In every mechanical equipment, electrical, transformer, telephone equipment, elevator machine or similar room, and in elevator lobbies. Elevator lobby detectors shall be connected to an alarm verification zone or be listed as a releasing device;
2. Smoke detectors for the control of air conditioning and ventilating systems shall be located as required by NFPA 90A, chapter 4, and installed per UFC Standard 10-2, and
3. For Group R, Division 1 Occupancies, in all interior corridors serving as a means of egress for an occupant load of 10 or more.

**1006.2.12.2.3 Emergency voice alarm-signaling system.** The operation of any automatic fire detector, sprinkler or water-flow device shall automatically sound an alert tone followed by voice instructions giving appropriate information and directions on a general or selective basis to the following terminal areas:

1. Elevators,
2. Elevator lobbies,
3. Corridors,
4. Exit stairways,
5. Rooms and tenant spaces exceeding 1,000 square feet (93 m<sup>2</sup>) in area,
6. Dwelling units in apartment houses,
7. Hotel guest rooms or suites, and
8. Areas of refuge. (As defined in the Building Code.)

A manual override for emergency voice communication shall be provided for all paging zones.

The emergency voice alarm-signaling system shall be designed and installed in accordance with the *[For SFM] California Building Code* and NFPA 72 as amended in Article 91.

**1006.2.12.2.4 Fire department communication system.** A two-way, approved fire department communication system shall be provided for fire department use. It shall operate between the central control station and elevators, elevator lobbies, emergency and standby power rooms and at entries into enclosed stairways.

**1006.2.12.2.3 Buildings with atriums.** Actuation of an atrium smoke-control system required by the Building Code shall initiate an audible fire alarm signal in designated portions of the building.

**1006.2.12.2.4 High-piled combustible storage uses.** When required by Article 81, high-piled combustible storage uses shall be provided with an automatic fire-detection system.

**1006.2.12.2.5 [For SFM] Automatic smoke detection system egress control devices.** An automatic smoke detection system shall be installed in occupancies provided with special egress control devices in accordance with this section and Article 91.

**1006.2.12.5.1 [For SFM] In other than Group I Occupancies, for single-story buildings smoke detectors shall be installed at ceilings throughout all occupied areas and mechanical/electrical spaces. For multiple story buildings smoke detectors shall be installed**

*throughout all occupied areas and mechanical/electrical spaces for the story where special egress-control devices are installed. Additional detectors are required on adjacent stories where occupants of those stories utilize the same exit egress.*

**1006.2.12.5.2 [For SFM] For Group I Occupancies, smoke detectors shall be installed at ceilings throughout all occupied areas and mechanical/electrical spaces of smoke-compartments where special egress-control devices are installed. Additional detectors are required in adjacent smoke-compartments where occupants of those compartments utilize the same exit egress.**

**1006.2.12.6 Corridors in office uses.** When required by the Building Code for corridors in lieu of one-hour corridor construction, smoke detectors shall be installed within office corridors in accordance with their listing. The actuation of any detector shall activate alarms audible in all areas served by the corridor.

**1006.2.12.7 Aerosol storage uses.** When required by Article 88, aerosol storage rooms and general purpose warehouses containing aerosols shall be provided with an approved manual alarm system.

**1006.2.12.8 Smoke-control systems.** An approved automatic smoke-detection system shall be provided when required by the Building Code for automatic control of a smoke-control system.

**1006.2.12.9 Lumber, plywood and veneer mills.** Lumber, plywood and veneer mills shall be provided with a manual fire alarm system. See Section 3004.5.2.

**1006.2.13 [For SFM] Group C Occupancies.** Every building or structure used or intended for sleeping purposes shall be provided with an automatic smoke-detector system.

**EXCEPTION:** Buildings and structures in existence and in operation prior to January 11, 1985.

## 1006.3 General System Design and Installation Requirements.

**1006.3.1 Design standards.** Fire alarm systems, automatic fire detectors, Emergency Voice Alarm Communication Systems and notification devices shall be designed, installed and maintained in accordance with *[For SFM] the appropriate standards of NFPA 72 as amended in Article 91 of the California Building Code, California Mechanical Code and the California Electrical Code.*

**1006.3.2 Equipment.** Systems and components shall be *[For SFM] California State Fire Marshal* listed and approved for the purpose for which they are installed.

### 1006.3.3 System layout and operation.

**1006.3.3.1 Manual fire alarm boxes.** When a manual fire alarm system is required, manual fire alarm boxes shall be distributed throughout so they are readily accessible, unobstructed, and are located in the normal path of exit travel from the area and as follows:

1. At every exit from every level.
2. Additional fire alarm boxes shall be located so that travel distance to the nearest box does not exceed 200 feet (60 960 mm).

When fire alarm systems are not monitored, an approved permanent sign that reads LOCAL ALARM ONLY—CALL FIRE DEPARTMENT shall be installed adjacent to each manual fire alarm box.

**EXCEPTION 1:** Separate signs need not be provided when the manufacturer has permanently provided this information on the manual fire alarm box.

## ARTICLE 91 — CALIFORNIA STANDARDS

**9101.1 California Standards.** The California Standards referred to as in various parts of this code, which are listed in Section 9002, are hereby declared to be part of this code and are referred to in this code as "CFC Standards."

Whenever this code refers to a UBC or UFC Standard, it shall be construed to mean the appropriate State Fire Marshal (SFM) adopted standard, as listed in this chapter.

**9101.1.1 National Standards Adopted by the State Fire Marshal (SFM).** Standards as adopted by the SFM in California Building Code, Chapter 35 are duplicated here for ease of reference.

Whenever the Uniform Building Code refers to:

UBC Standard                      It shall be construed to mean:

9-1	NFPA 13
9-2	NFPA 14
9-3	NFPA 13R

**9101.1.2 California State Fire Marshal (SFM) Standards.**

SFM 12-3 Releasing Systems for Security Bars in Dwellings

SFM 12-4 Smoke or Heat Ventilators

SFM 12-7-1 Fire Tests of Building Construction and Materials

SFM 12-7-2 Fire Dampers

SFM 12-7-3 Fire-testing Furnaces

SFM 12-7-4 Fire Door Assembly Tests

SFM 12-8-100 Room Fire Tests for Wall and Ceiling Materials

SFM 12-8-1A Calculation of the Total Rate of Heat and Carbon Monoxide or Carbon Dioxide Production

SFM 12-8-1B Mounting Techniques for Wall and Ceiling Interior Finish Material

SFM 12-10-4 Power Operated Exit Doors

SFM 12-10-2 Single Point Latching or Locking Devices

SFM 12-10-3 Emergency Exit and Panic Hardware

SFM 12-71-1 Air Filters

SFM 12-72-1 Protective Signaling Systems

SFM 12-72-2 Single and Multiple Station Fire Alarm Devices

SFM 12-73-3 Smoke Detectors, Combustion Products Type

**9101.1.3 [For SFM] National Standards.**

1. NFPA 11, 2002 Edition, Low-Medium-High Expansion Foams

2. NFPA 11A, 1999 Edition, Medium- and High-Expansion Foam Systems

3. NFPA 12, 2000 Edition, Carbon Dioxide Extinguishing Systems

4. NFPA 12A, 1997 Edition, Halon 1301 Fire Extinguishing Systems

5. NFPA 13, 2002 Edition, The Installation of Sprinkler Systems, as amended.

6. NFPA 13D, 2002 Edition, Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes

7. NFPA 13R, 2002 Edition, Installation of Sprinkler Systems in Residential Occupancies up to and Including Four Stories in Height

8. NFPA 14, 2003 Edition, Installation of Standpipe, Private Hydrant, and Hose Systems

9. NFPA 15, 2001 Edition, Water Spray Fixed Systems for Fire Protection

10. NFPA 16, 1999 Edition, Installation of Deluge, Foam-Water Sprinkler and Foam-Water Spray Systems

11. NFPA 17, 2002 Edition, Dry Chemical Extinguishing Systems

12. NFPA 17A, 2002 Edition, Wet Chemical Extinguishing Systems.

13. NFPA 20, 1999 Edition, Installation of Stationary Pumps for Fire Protection

14. NFPA 22, 2003 Edition, Water Tanks for Private Fire Protection

15. NFPA 24, 2002 Edition, Installation of Private Fire Service Mains and Their Appurtenances

16. NFPA 37, 2002 Edition, Installation and Use of Stationary Combustion Engines and Gas Turbines

17. NFPA 50, 2001 Edition, Bulk Oxygen Systems at Consumer Sites

18. NFPA 52, 2002 Edition, Compressed Natural Gas (CNG)

Vehicular Fuel Systems Code

19. NFPA 54, 2002 Edition, National Fuel Gas Code

20. NFPA 57, 2002 Edition, Liquefied Natural Gas (LGN) Vehicular Fuel Systems Code

21. NFPA 58, 2001 Edition, Standard for the Storage and Handling of Liquefied Petroleum Gases.

22. NFPA 72, 2002 Edition, National Fire Alarm Code, as amended.

23. NFPA 92 A, 2000 Edition, Recommended Practice for Smoke-Control Systems

24. NFPA 99, 2002 Edition, Health Care Facilities

25. NFPA 253, 2000 Edition, Test for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source

26. NFPA 2001, 2000 Edition, Clean Agent Fire Extinguishing Systems

27. UL 13, Power-limited Circuit Cables, 4 Second Edition February 29, 1996.

28. UL 38, Manually Actuated Signaling Boxes, Seventh Edition, March 26, 1999, with revisions through June 12, 2001.

29. UL 193, Alarm Valves for Fire-Protection Service, Tenth Edition, January 12, 2004.

30. UL 199, Automatic Sprinklers for Fire Protection Service, Edition 31. UL 199 E Fire Test of Sprinklers and Water Spray Nozzles for the Protection of Deep Fat Fryers, May 2004.

32. UL 217, Single- and Multiple-Station Smoke Alarm, Fifth Edition, February 21, 1997 with revisions through June 15, 2004.

33. UL 228, Door Closers/holders, with or without Integral Smoke Detectors Fourth Edition, April 29, 1997, with revisions through January 21, 1999.

34. UL 260, Dry Pipe and Deluge Valves for Fire Protection Service, Seventh Edition, March 17, 2004.

35. UL 262, Gate Valves for Fire Protection Service, Eighth Edition, February 26, 2004.

36. UL 268, Smoke Detectors for Fire Protective Signaling Systems, Fourth Edition, December 30, 1996, with revisions through October 22, 2003.

37. UL 268A, Smoke Detectors for Duct Application, Third Edition, May 15, 1998 with revisions through April 10, 2003.

38. UL 300, Fire Testing of Fire Extinguishing Systems for Protection of Restaurant Cooking Areas, Second Edition, March 29, 1996.

39. UL 312, Check Valves for Fire-Protection Service, Ninth Edition, January 8, 2004.

40. UL 346, Waterflow Indicators for Fire Protective Signaling Systems, Fourth Edition, May 27, 1994.

41. UL 464, Audible Signal Appliances Eighth Edition, April 28, 2003, with revisions through October 10, 2003.

42. UL 497B, Protectors for Data Communication and Fire Alarm Circuits, Fourth Edition, June 14, 2004.

43. UL 521, Heat Detectors for Fire Protective Signaling Systems, Seventh Edition, February 19, 1999 with revisions through October 3, 2002.

44. UL 539, Single- and Multiple-Station Heat Detectors, Fifth Edition, January 21, 2000.
45. UL 632, Electrically Actuated Transmitters, Seventh Edition, March 29, 2000.
46. UL 753, Alarm Accessories for Automatic Water Supply Valves for Fire Protection Service, Ninth Edition, May 7, 2004.
47. ~~43.~~ UL 813, Commercial Audio Equipment, Seventh Edition, December 13, 1996, with revisions through December 7, 1999.
48. UL 864, Control Units for Fire Protective Signaling Systems, as amended, Ninth Edition, September 30, 2003, with revisions through October 29, 2003.
49. UL 884, Underfloor Electric Raceways and Fittings, Tenth Edition, 1987 November 30, 1998.
50. UL 913, Intrinsically Safe Apparatus for Use in Class I, II, and III, Division 1, Hazardous Locations, Sixth Edition, August 8, 2002.
51. UL 916 Energy Management Equipment, Third Edition, December 23, 1998 with revisions through February 10, 2004.
52. UL 924, Emergency Lighting and Power Equipment, Eighth Edition, March 29, 1995 with revisions through and including July 11, 2001.
53. UL 985, Household Fire Warning System Units, Fifth Edition, May 26, 2000 with revisions through April 29, 2004.
54. UL 1091, Butterfly Valves for Fire Protection Service, Sixth Edition, June 3, 2003.
55. UL 1424, Cables for Power-limited Fire Protective Signaling Circuits, Second Edition, April 29, 1996.
56. UL 1480, Speakers for Fire Protective Signaling Systems Fifth Edition, January 31, 2003.
57. UL 1481, Power Supplies for Fire Protective Signaling Systems, Fourth Edition, April 9, 1999.
58. UL 1626 Residential Sprinklers for Fire Protection Service, 1.2 revised September 6, 2000.
59. UL 1711, Amplifiers for Fire Protective Signaling Systems, Third Edition, February 18, 1999.
60. UL 1730, Smoke Detector Monitors and Accessories (annunciators) for Individual Living Units of Multifamily Residences and Hotel/Motel Rooms, Third Edition, September 18, 1998, with revisions through May 17, 1999.
61. UL 1971, Signaling Devices for the Hearing Impaired, Third Edition, November 29, 2002, with revisions through May 3, 2004.
62. UL 1484, Residential Gas Detectors, Fourth Edition, December 28, 2000.
63. UL 1994, Low Level Path Marking and Lighting Systems, Third Edition, January 30, 2004.
64. UL 2034, Single and Multiple Station Carbon Monoxide Alarms, Second Edition, October 29, 1996, with revisions through June 28, 2002.
65. UL 2079, Tests for Fire Resistance of Building Joint Systems, Third Edition, July 31, 1998 as amended.
66. FM Class No. 3260, Radiant Energy-Sensing Fire Detectors for Automatic Fire Alarm Signaling, August 2000 Edition.

## **9102 [For SFM] AMENDMENTS TO NATIONAL STANDARDS**

### **9102.1 [SFM] NFPA 72, ~~1999~~ 2002 Edition, as amended.**

#### **Amend Section 4.4.4.4, as follows:**

**Sec. 4.4.4.4 Wiring.** The installation of all wiring, cable and equipment shall be in accordance with the California Electrical Code, and specifically with Article 760, 770 and 800, where applicable. Optical fiber cables shall be protected against mechanical injury in accordance with Article 760.

#### **Amend Section 1-5.7.1.2 as follows:**

**Sec. 1-5.7.1.2. Zone of Origin.** Fire alarm systems serving two or more zones shall identify the zone of origin of the alarm initiation by annunciation or coded signal as required by the authority having jurisdiction.

#### **Amend Section 5.12.4 as follows**

**Sec. 5.12.4** Each manual fire alarm box shall be securely mounted. The operable part of each manual fire alarm box shall be not less than 42" (1066 mm) and not more than 48" (1219mm) above floor level.

#### **Add a Section 5.12.8 by adding an exception as follows:**

**EXCEPTION:** When individual dwelling units are served by a single exit stairway, additional boxes at other than the ground floor may be omitted.

#### **Add a Section 6.8.5.4.1(2) as follows:**

**Sec. 6.8.5.4.1(2)** A smoke detector continuously subjected to a smoke concentration above alarm threshold magnitude initiates a system alarm within 30 seconds.

**Add a Sec. 3-8.4.1.3.3.3(3)c and amend Sec. 6.4.2.2.2 to read as follows:** Where the installation wiring is enclosed in a 2-hour-rated cable assembly, enclosed in a 2-hour-rated enclosure, other than a stairwell or installation of listed circuit integrity (C.I.) cable, which meets or exceeds a 2-hour fire-resistance rating.

#### **Amend Sections 7.4.2.1 and 7.4.3.2 as follows:**

**Sec. 7.4.2.1.** Audible notification appliances intended for operation in the public mode shall have a sound level of not less than 75dBA at 10 feet (3m) or more than 110dBA at the minimum hearing distance from the audible appliance.

**Sec. 7.4.3.2. Private Mode.** Audible notification appliances intended for operation in the private mode shall have a sound level of not less than 45dBA at 10 feet (3m) or more than 110dBA at the minimum hearing distance from the audible appliance.

#### **Add a Section 7.5.1.1 as follows:**

**7.5.1.1 Notification Appliances for the Hearing Impaired.** Approved notification appliances for the hearing impaired shall be installed in the following areas:

1. Restrooms
2. Corridors
3. Music practice rooms
4. Band rooms
5. Gymnasiums
6. Multipurpose rooms
7. Occupational shops
8. Occupied rooms where ambient noise impairs hearing of the fire alarm
9. Lobbies
10. Meeting rooms
11. Any other area for common use

**NOTE:** This section is also adopted by the Division of the State Architect, Access Compliance for buildings not regulated by the State Fire Marshal.

**Sec. 2-4.2.1** The alarm verification feature shall not be used for household fire warning equipment.

#### **Add to Section 3-8.4.1.3.5.5.1 as follows:**

**Sec. 3-8.4.1.3.5.5.1.** Special fire alarm provisions for occupancies having floors used for human occupancy located more than 75 feet (22 860 mm) above the lowest level of the fire department vehicle access, are found in Title 24, Part 2, Chapter 4, of the California Building Code. Those provisions include providing a central

control station. The requirements provided for, in a fire command center, may be included within the central control station.

**Amend Section 26.2 F as follow:**

F. A circuit for a supplementary signal annunciator, signal-sounding appliance, motor controller or similar appliance, provided that a break, short or ground fault in no way affects the operation of the air duct smoke detector, except for omission of the supplementary feature.

**9102.2 [For SFM] UL 864, 2003 Edition amend as follows:**

**Amend Figure No. 55.1 on page 129 as follows:**

**RETARD-RESET-RESTART PERIOD - MAXIMUM 30 SECONDS.** No alarm obtained from control units. Maximum permissible time is 30 seconds.

**Amend Section 55.2.2 on page 128 as follows:**

Where an alarm verification feature is provided, the maximum retard-reset period before an alarm signal can be confirmed and indicated at the control unit, including any control unit reset time and the power-up time for the detector to become operational for alarm, shall not exceed 30 seconds. (The balance of the section text is to remain unchanged.)

**Add a Section 55.2.9 as follows:**

**55.2.9** Smoke detectors connected to an alarm verification feature shall not be used as releasing devices.

**EXCEPTION:** Smoke detectors, which operate their releasing function immediately upon alarm actuation independent of alarm verification feature.

The maximum retard-reset-restart period of alarm verification to a system control unit, including any time delay due to system reset and power-up time of the smoke detectors to become operational for alarm, shall not exceed 30 seconds. (The balance of the section text is to remain unchanged.)

**Amend Section 89.1.10 as follows:**

**THIS UNIT INCLUDES AN ALARM VERIFICATION FEATURE THAT WILL RESULT IN A DELAY OF THE SYSTEM ALARM SIGNAL FROM THE INDICATED CIRCUITS. THE TOTAL DELAY (CONTROL UNIT PLUS SMOKE DETECTORS) SHALL NOT EXCEED 30 SECONDS.** (The balance of the section text is to remain unchanged.)

**9102.3 [For SFM] NFPA 13, 2002 Edition.**

**9.3.5.8.3 Add a sentence after the first sentence as follows:**

Where pipe is used for sway bracing, it shall have a wall thickness of not less than Schedule 40.

**Amend Section 9.3.5.8.11 to read:**

Materials, other than pipe, not specifically included in Table 6-4.5.8.5 ... (The balance of the exception text is to remain unchanged.)

**Section 9.3.5.9.4 is not adopted by the SFM:** Lag screws are not permitted.

**Delete the Exception No. 1 of Section 6-4.5.9 and renumber Exception No. 2 to No.1**

**Adopt entire Section 6-4.7.4**





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